



**Department of
Environmental Protection
Bureau of Land & Water Quality November 2003**

O&M Newsletter

A monthly newsletter for wastewater discharge licensees, treatment facility operators,
and associated persons

For Practice:

1. The precision of an instrument used to perform a laboratory test is a measure of
 - a. The accuracy of the average measurement
 - b. The ability to repeat results within a small margin of error.
 - c. The accuracy of the smallest or largest measurement made
 - d. The values of all measurements repeatedly.
2. The basic unit of electrical current is:
 - a. the watt
 - b. the ohm
 - c. the volt
 - d. the ampere
3. If a treatment plant has a dilution factor of 12.3 and the water quality limit for copper is 2.99 parts per billion (p.p.b.), what is the allowable concentration of copper in the treatment plant effluent?
 - a. 36.78 p.p.b.
 - b. 24.87 p.p.b.
 - c. 12.86 p.p.b.
 - d. 2.99 p.p.b.
4. An industrial user has a chemical spill that contains a high concentration of lead and copper. What could the treatment plant operators do to protect the treatment plant and remove the metals from the wastewater?
 - a. Lower the pH of the influent using a weak acid.
 - b. Increase aeration.
 - c. Increase the pH of the influent by adding lime or caustic soda.
 - d. bypass the primary clarifiers.

Approved Training

November 5, 2003 in Brunswick, ME –
Centrifugal Pump Hydraulic Application &
Troubleshooting - Sponsored by JETCC,
(207) 253-8020 – Approved for 6 hours.

November 6, 2003 in Portland, ME – New
Technologies in Phosphorous Removal -
Sponsored by JETCC, (207) 253-8020 –
Approved for 6 hours.

November 6, 2003 in Brunswick Isle, ME –
Solids Handling, Utility Mgmt &
Disinfection – Sponsored by MWRA, (207)
729-6569 – Approved for 6 hours.

November 13, 2003 in Augusta, ME –
Caring for you lab instruments, Establishing
a Lab QA/QC Program & proper Sampling
Techniques - Sponsored by JETCC, (207)
253-8020 – Approved for 6 hours.

November 19, 2003 in Norway, ME –
Excavation: Competent Person Training –
Sponsored by MWRA, (207) 729-6569 –
Approved for 5 hours.

November 20, 2003 in South Portland, ME –
SCADA System Management &
Maintenance - Sponsored by JETCC, (207)
253-8020 – Approved for 6 hours.

December 9, 2003 in Presque Isle, ME –
Safety/Security Screening of wastewater for
toxicity & Simplifying your Wastewater
Process Monitoring - Sponsored by JETCC,
(207) 253-8020 – Approved for 6 hours.

December 11, 2003 in Augusta, ME – 10
Best Kept Water & Wastewater
Management Secrets with Simplified
Nutrient Monitoring in Small Wastewater
Systems - Sponsored by JETCC, (207) 253-
8020 – Approved for 6 hours.

December 12, 2003 in Augusta, ME –
Chlorination Disinfection Science:
Comparing Gas, Liquid and Powder
Chlorination Process plus 10 Best Kept
Water & Wastewater Management Secrets -
Sponsored by JETCC, (207) 253-8020 –
Approved for 6 hours.

December 2&3, 2003 in Freeport, ME -
MRWA Annual Conference – Sponsored by
MWRA, (207) 729-6569 – Approved for
TBA hours.

Certification News

The Fall Wastewater Treatment Plant
Operator Exams were given on November
12, 2003. The results should be back before
Christmas, but there are no guarantees.
We'll let everyone know as soon as we have
the results. The Spring exam will be given
on May 12, 2004.

Answers to *For Practice*:

1. b. The precision of an instrument is that
instrument's ability to repeat
measurements of the same parameter
with little or no variation. For
example, a pH meter which
measured a pH of 6.90 and 6.89 for
the same aliquot of sample would be
precise
2. d. The ampere is the unit used to
express electrical current.
3. a. $2.99 \text{ p.p.b.} \times 12.3 = 36.78 \text{ p.p.b.}$
4. c. Raising the pH will tend to form
insoluble hydroxides with the metal
ions that will precipitate the metals
out of the wastewater stream.

DMR-QA Study 23 Update

Participants in the EPA DMR-QA Study 23 should have received their chemistry test results from their “unknown samples” provider labs by October 31, 2003. These evaluation reports were also sent to EPA and DEP. Any discrepancies (Check For Error, Not Acceptable) should be investigated and resolved by the permittees. This means that the laboratory technician has to try to figure out what caused the laboratory test result problem and fix any analytical issues so that any future data generated is accurate and reliable. A retest QA sample may be a good idea in order to prove that the previous problem has truly been resolved.

After the cause of the inaccurate data is identified, corrective action should be taken in the laboratory. For all parameters that were evaluated as “Not Acceptable”, a cause and correction letter should be sent to the DEP by December 8, 2003. Please describe the corrective action taken in sufficient detail to explain why this will correct the problem. Please send these letters to Ken Jones, DECTA, 17 State House Station, Augusta, ME 04333. David Dodge has retired and is no longer the State DMR-QA Coordinator.

If you have questions about the DMR-QA program, please call me at 287-4869.

Ken Jones